

# EXHIBIT I



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/327,944	07/10/2014	Keith Benson	ADHIT.029C1	5507

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KNOBBE, MARTENS, OLSON & BEAR, LLP  
2040 Main Street, Fourteenth Floor  
Irvine, CA 92614

EXAMINER
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CHOE, HENRY

ART UNIT	PAPER NUMBER
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2842

NOTIFICATION DATE	DELIVERY MODE
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09/09/2015

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jayna.cartee@knobbe.com  
efiling@knobbe.com

<b>Office Action Summary</b>	<b>Application No.</b> 14/327,944	<b>Applicant(s)</b> BENSON, KEITH	
	<b>Examiner</b> HENRY CHOE	<b>Art Unit</b> 2842	<b>AIA (First Inventor to File) Status</b> No

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/7/15.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1-39 is/are pending in the application.  
     5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 17-20,24-31,33 and 35-39 is/are rejected.
- 8) ☒ Claim(s) 21-23,32 and 34 is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All    b) ☐ Some\*\*    c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
     Paper No(s)/Mail Date 10/16/15.
- 3) ☐ Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_.
- 4) ☐ Other: \_\_\_\_.

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The present application is being examined under the pre-AIA first to invent provisions.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-20, 24-31, 33 and 35-39 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fratti (Fig. 1) in view of Lautzenhiser et al (Fig. 23) further in view of banba (Fig. 23).

Regarding claims 17, 19 and 31, Fratti (Fig. 1) discloses an amplifier circuit comprising an input transmission line (102), output transmission line (104), and a plurality of amplifiers (120, 130, 140, 150) and wherein an input of amplifier is coupled to the input transmission line (102) and an output of amplifier is coupled to the output transmission line (104). As described above, Fratti (Fig. 1) discloses all the limitations in claim 17 except for that the plurality of cascode amplifiers and each cascode amplifier includes three or more FETs in a stack and a first stabilization circuit coupled to the drain of third FET. Lautzenhiser et al (Fig. 23) discloses an amplifier circuit comprising a cascode amplifier (Q1, Q2, Q5, Q8) which includes four FETs in a stack. It would have been obvious to substitute Lautzenhiser et al's cascode amplifier (Q1, Q2, Q5, Q8 in

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Fig. 23 of Lautzenhiser et al) in place of Fratti's amplifier (120, 130, 140, 150 in fig. 1 of Lautzenhiser et al) since Lautzenhiser et al discloses a generic amplifier thereby suggesting that any equivalent amplifier would have been usable in Lautzenhiser et al's reference. Furthermore, Banba (Fig. 23) discloses an amplifier circuit comprising the first stabilization circuit (Rf, Cf) coupled to the drain of the FET (M2). It would have been obvious to one of ordinary skill in the art, at the time the invention was made would have found it obvious to have employed the first stabilization circuit (Rf, Cf) at the drain terminal of the third FET of Lautzenhiser et al (Q2 in Fig. 23 of Lautzenhiser et al), such as taught by Banba (Fig. 23) in order to provide the advantageous benefit of stabilizing the variation of the gain of the amplifier.

Regarding claims 18 and 28, exactly same as the previous office action.

Regarding claim 20, exactly same as the previous office action.

Regarding claims 24, 30 and 36, Fratti (Fig. 1) further comprising a gate line termination (160) coupled to the input transmission line (102) and a drain line termination (110) coupled to the output transmission line (104).

Regarding claim 25, exactly same as the previous office action.

Regarding claim 26, wherein the plurality of cascode amplifiers comprises between four (Q1, Q2, Q5, Q8) and ten cascode amplifiers.

Regarding claims 27 and 29, Fratti (Fig. 1) discloses an amplifier circuit comprising an input transmission line (102), output transmission line (104), and a plurality of amplifiers (120, 130, 140, 150) and wherein an input of amplifier is coupled to the input transmission line (102) and an output of amplifier is coupled to the output

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transmission line (104). As described above, Fratti (Fig. 1) discloses all the limitations in claim 17 except for that the plurality of cascode amplifiers and each cascode amplifier includes three or more FETs in a stack and a first stabilization circuit coupled to the drain of second FET. Lautzenhiser et al (Fig. 23) discloses an amplifier circuit comprising a cascode amplifier (Q1, Q2, Q5, Q8) which includes four FETs in a stack. It would have been obvious to substitute Lautzenhiser et al's cascode amplifier (Q1, Q2, Q5, Q8 in Fig. 23 of Lautzenhiser et al) in place of Fratti's amplifier (120, 130, 140, 150 in fig. 1 of Lautzenhiser et al) since Lautzenhiser et al discloses a generic amplifier thereby suggesting that any equivalent amplifier would have been usable in Lautzenhiser et al's reference. Furthermore, Banba (Fig. 23) discloses an amplifier circuit comprising the first stabilization circuit (Rf, Cf) coupled to the drain of the FET (M2). It would have been obvious to one of ordinary skill in the art, at the time the invention was made would have found it obvious to have employed the first stabilization circuit (Rf, Cf) at the drain terminal of the second FET of Lautzenhiser et al (Q5 in Fig. 23 of Lautzenhiser et al), such as taught by Banba (Fig. 23) in order to provide the advantageous benefit of stabilizing the variation of the gain of the amplifier.

Regarding claims 37-39, wherein the three or more FETs (Q1, Q2, Q5, Q8) are electrically connected in series with one another.

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### ***Allowable Subject Matter***

Claims 21-23, 32 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.

/Henry K Choe/

Primary Examiner, Art Unit 2817



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